

# NOMENCLATURAL COMBINATIONS IN NORTH AMERICAN *PANICUM* SUBGENUS *DICHANTHELIUM* AND SUBGENUS *AGROSTOIDES* (POACEAE: PANICEAE)

Joseph K. Wipff

Herbarium  
Pure Seed Testing, Inc.  
Canby, OR 97013, U.S.A.

## ABSTRACT

The new combinations made here are: *Panicum aciculare* var. *ramosum*; *Panicum aciculare* var. *neuranthum*; *Panicum acuminatum* var. *ferventicola*; *Panicum acuminatum* var. *thermale*; *Panicum commutatum* var. *equilaterale*; *Panicum ovale* var. *praecocius*; and *Panicum rigidulum* var. *abscissum*.

## RESUMEN

Se hacen las siguientes nuevas combinaciones: *Panicum aciculare* var. *ramosum*; *Panicum aciculare* var. *neuranthum*; *Panicum acuminatum* var. *ferventicola*; *Panicum acuminatum* var. *thermale*; *Panicum commutatum* var. *equilaterale*; *Panicum ovale* var. *praecocius*; y *Panicum rigidulum* var. *abscissum*.

The debate over whether *Dichanthelium* should be recognized as a segregate genus from *Panicum* or as a subgenus of *Panicum* will probably never be resolved, with both 'camps' having data to support their views. It is a debate that I will not get into here, but will only provide references for both treatments, so the reader can form their own opinion. Gould (1974), Clark and Gould (1975), Gould and Clark (1978), Gould (1980) and Giussani et. al (2001) support the recognition of *Dichanthelium* as a segregate genus. Whereas, Pohl (1980), Lelong (1984), Zuloaga (1987), Morrone and Zuloaga (1991), Zuloaga et al. (1991) and Zuloaga et al. (1993) support the recognition of *Dichanthelium* as a subgenus of *Panicum*; a classification with which I also agree.

Freckmann and Lelong (2002) published fifty-two new combinations in *Dichanthelium* and *Panicum* while preparing their treatment for Volume 25 of *The Flora of North America* (Barkworth et al. [eds.], in press). Some of the taxa treated in *Dichanthelium* by Freckmann and Lelong (2002) do not have an available name in *Panicum*, which are required for use in the *Vascular Plants of Texas: A Comprehensive Checklist including Synonymy, Bibliography, and Index* (Jones et al. 1997), revision in progress, as well as, for on going work on *Panicum* subg. *Dichanthelium* in North America. In addition, *Panicum abscissum* Swallen is recognized at the rank of variety and not subspecies, following the treatment of *Panicum rigidulum* by Lelong (1984), since no data were presented in Freckmann

and Lelong (2002) warranting the treatment of these taxa at the subspecific rank.

**Panicum aciculare** Desvaux ex Poiret var. **ramosum** (Griseb.) Wipff, comb. nov.

BASIONYM: *Panicum neuranthum* Griseb. var. *ramosum* Griseb., Cat. pl. Cub. 232. 1866. *Panicum fusiforme* Hitchc., Contr. U.S. Natl. Herb. 12:222. 1909. *Dichanthelium fusiforme* (Hitchc.) Harvill, Castanea 42:177. 1977. *Dichanthelium aciculare* var. *ramosum* (Griseb.) Davidse, Novon 2:104. 1992. *Dichanthelium aciculare* Desvaux ex Poiret subsp. *fusiforme* (Hitchc.) Freckmann & Lelong, Sida 20:167. 2002. TYPE: CUBA: western Cuba, 1863, C. Wright 3454 (HOLOTYPE: GOET, fragment US).

**Panicum aciculare** Desvaux ex Poiret var. **neuranthum** (Griseb.) Wipff, comb. et stat. nov. BASIONYM: *Panicum neuranthum* Griseb., Cat. pl. Cub. 232. 1866. *Dichanthelium aciculare* Desvaux ex Poiret subsp. *neuranthum* (Griseb.) Freckmann & Lelong, Sida 20:167. 2002. TYPE: CUBA: eastern Cuba, 1860, C. Wright 3453 (HOLOTYPE: US).

**Panicum acuminatum** Sw. var. **ferventica** (Schmoll) Wipff, comb. et stat. nov.

BASIONYM: *Panicum ferventica* Schmoll, Madroño 5:92. 1939; and the autonym created by *Panicum ferventica* var. *papillosum* Schmoll, Madroño 5:94 and *Panicum ferventica* Schmoll var. *sericeum* Schmoll, Madroño 5:92. 1939. TYPE: U.S.A. WYOMING: Yellowstone National Park, in fine gravel in warm soil close to a boiling spring, bathed in hot vapor, 5 mi N of Norris Geyser Basin, 10 Aug 1908, A. Chase 5252 (HOLOTYPE: GH).

*Panicum ferventica* Schmoll var. *sericeum* Schmoll, Madroño 5:92. 1939. *Dichanthelium lanuginosum* (Elliott) F.W. Gould var. *sericeum* (Schmoll) Spellenberg, Madroño 23:150. 1975. *Dichanthelium acuminatum* (Swartz) F.W. Gould & C.A. Clark var. *sericeum* (Schmoll) Freckmann, Phytologia 48:107. 1981. *Dichanthelium acuminatum* (Swartz) F.W. Gould & C.A. Clark subsp. *sericeum* (Schmoll) Freckmann & Lelong, Sida 20:168. 2002. TYPE: U.S.A. WYOMING: in wet ground about hot springs, Mammoth Hot Springs, Yellowstone National Park, 21 Jul 1889, A. Nelson & E. Nelson 6037 (HOLOTYPE: RM 20108).

*Panicum ferventica* Schmoll var. *papillosum* Schmoll, Madroño 5:94. 1939. TYPE: CANADA. ALBERTA: Banff, on declivity wet with water from hot spring, 31 Jul 1914, A.S. Hitchcock 11511 (HOLOTYPE: GH).

**Panicum acuminatum** Sw. var. **thermale** (Bol.) Wipff, comb. nov. BASIONYM: *Panicum thermale* Bol., Proc. Calif. Acad. Sci. 2:181. 1862. *Dichanthelium lanuginosum* (Elliott) F.W. Gould var. *thermale* (Bol.) Spellenberg, Madroño 23:151. 1975. *Dichanthelium acuminatum* (Swartz) F.W. Gould & C.A. Clark var. *thermale* (Bol.) Freckmann, Phytologia 48:107. 1981. *Dichanthelium acuminatum* (Swartz) F.W. Gould & C.A. Clark subsp. *thermale* (Bol.) Freckmann & Lelong, Sida 20:168. 2002. TYPE: U.S.A. CALIFORNIA: northern part of Sonoma County, on hot rocks and in hot water flowing from Geyser Springs and Geyser Mountains, H.N. Bolander 3941 (HOLOTYPE: GH).

**Panicum commutatum** Schultes var. **equilaterale** (Scribnér) Wipff, comb. et stat. nov. BASIONYM: *Panicum equilaterale* Scribnér, Bull. Div. Agrostol. U.S.D.A. 11:42. 1898. *Dichanthelium commutatum* (Schultes) Gould subsp. *equilaterale* (Scribnér) Freckmann & Lelong, Sida 20:169. 2002. TYPE: U.S.A. FLORIDA: Lake Co.: scrubby hammock lands, Eustis, 16–25 Aug 1894, G.V. Nash 1674 [LECTOTYPE: US 743929 (designated by Hitchc. & Chase, Contr. U.S. Natl. Herb. 15:310. 1910)].

**Panicum ovale** Elliott var. **praecocius** (Hitchcock & Chase) Wipff, comb. nov.

BASIONYM: *Panicum praecocius* Hitchc. & Chase, Rhodora 8:206. 1906. *Panicum lanuginosum* Elliott var. *praecocius* (Hitchc. & Chase) Dore in McNeill & Dore, Naturaliste Canad. 103:562. 1977. *Dichanthelium villosissimum* (Nash) R.W. Freckman var. *praecocius* (Hitchc. & Chase)

Freckmann, Phytologia 39:270. 1978. *Dichanthelium ovale* (Elliott) F.W. Gould & C.A. Clark subsp. *praecocius* (Hitchc. & Chase) Freckmann & Lelong, Sida 20:170. 2002. TYPE: U.S.A. ILLINOIS: Stark Co.: dry bank, near Wady Petra, 30 Jun 1900, V.H. Chase 649 (HOLOTYPE: US 558686).

**Panicum rigidulum** Nees var. **abscissum** (Swallen) Wipff, stat. nov. BASIONYM: *Panicum abscissum* Swallen, J. Wash. Acad. Sci. 30:215, f. 4. 1940. *Panicum rigidulum* Bosc ex Nees subsp. *abscissum* (Swallen) Freckmann & Lelong, Sida 20:172. 2002. TYPE: U.S.A. FLORIDA: Sebring, in dry sand at tourist camp near lake, 3 Oct 1925, P. Weatherwax s.n. (HOLOTYPE: US 1259952).

#### ACKNOWLEDGMENTS

I am grateful to K.N. Gandhi (GH) for his insightful review and comments regarding the nomenclature. I also would like to thank S.D. Jones (BRCH) and two anonymous reviewers for their helpful suggestions and comments on the manuscript.

#### REFERENCES

- BARKWORTH, M.E., K.M. CAPELS, S. LONG, and M.B. PIEP (eds.). In Press. Magnoliophyta: Commelinidae (in part): Poaceae, part 2. Flora of North America North of Mexico, volume 25. Oxford University Press, New York.
- CLARK, C.A. and F.W. GOULD. 1975. Some epidermal characteristics of *Panicum*, *Dichanthelium* and *Echinochloa*. Amer. J. Bot. 62:743–748.
- FRECKMANN, R.W. and M.G. LELONG. 2002. Nomenclatural changes and innovations in *Panicum* and *Dichanthelium* (Poaceae: Paniceae). Sida 20:161–174.
- GIUSSANI, L.M., J.H. COTA-SÁNCHEZ, F.O. ZULOAGA, and E.A. KELLOGG. 2001. A molecular phylogeny of the grass subfamily Panicoideae (Poaceae) shows multiple origins of C4 photosynthesis. Amer. J. Bot. 88:1993–2001.
- GOULD, F.W. 1974. Nomenclatural changes in *Dichanthelium* (Poaceae). Phytologia 39:268–271.
- GOULD, F.W. 1980. The Mexican species of *Dichanthelium* (Poaceae). Brittonia 32:353–364.
- GOULD, F.W. and C.A. CLARK. 1978. *Dichanthelium* (Poaceae) in the United States and Canada. Ann. Missouri Bot. Gard. 65:1088–1132.
- JONES, S.D., J.K. WIPFF, and P.M. MONTGOMERY. 1997. Vascular plants of Texas: A comprehensive checklist including synonymy, bibliography, and index. Austin, University of Texas Press.
- LELONG, M.G. 1984. New combinations for *Panicum* subgenus *Panicum* and subgenus *Dichanthelium* (Poaceae) of the southeastern United States. Brittonia 36:262–273.
- MORRONE, O. and F.O. ZULOAGA. 1991. Estudios morfológicos en el subgenera *Dichanthelium* de *Panicum* (Poaceae: Panicoideae: Paniceae), con especial referencia a *Panicum sabulorum*. Ann. Missouri Bot. Gard. 78:915–927.
- POHL, R.W. 1980. Gramineae. In: Flora Costaricensis. W. Burger, ed. Fieldiana: Botany 4:1–608.
- ZULOAGA, F.O. 1987. Systematics of the New World species of *Panicum* (Poaceae: Paniceae). In: Grass systematics and Evolution, T.R. Soderstrom, K.W. Hilu, C.S. Campbell, and M.E. Barkworth, eds. Smithsonian Institution Press, Washington, D.C. Pp. 287–306.

ZULOAGA, F.O., J. DUBCOVSKY, and O. MORRONE. 1991. Infrageneric phenetic relations in New World *Panicum* (Poaceae: Panicoideae: Paniceae): a numerical analysis. Canad. J. Bot. 71:1312–1327.

ZULOAGA, F.O., R.P. ELLIS, and O. MORRONE. 1993. A revision of *Panicum* subg. *Dichanthelium* sect. *Dichanthelium* (Poaceae: Panicoideae: Paniceae) in Mesoamerica, the West Indies, and South America. Ann. Missouri Bot. Gard. 80:119–190.